ANOTHER GENERAL

The two warring camps have been compared from almost all possible angles: man power, industrial capacity, natural resources, national morale, etc. But there is another extremely important factor which has usually been overlooked: the ton-mile, i.e., the number of tons of supplies multiplied by the number of miles over which each camp has to transport them to its front lines. We believe that, together with "Generals" Winter, Mud, and Hunger, "General" Ton-Mile deserves to be considered one of the great generals of the war.

Since the accompanying chart was drawn before the Anglo-American attack on French North Africa, the term "North Africa" stands only for the Egyptian front and does not include Morocco, Algeria, and Tunisia.—K.M.

IN the spring of this year, the German eastern front in the southern part of the Soviet Union ran along a line from Kharkov to Taganrog. Today it runs from Stalingrad to Mosdok. This means that all food supplies, ammunition, gasoline, field hospitals, and countless other things that are necessary for the maintenance of a great modern army, must now be transported over bad roads approximately 500 miles further than in the spring. If we reckon the strength of the European southern wing in Russia at 1 million men (to take a round number), and that an average of 10 tons of material must be transported for each man during a given period, then the multiplication of 1 million men by 10 tons and 500 miles results in an additional burden of 5 billion ton-miles to be borne by the German transport system.

This is an enormous figure. But everything is relative. Ton-miles are not important in themselves but in comparison with the ton-miles of the enemy. In order to carry out this comparison, we have drawn up a chart with which we believe to have made an original contribution towards understanding the problems of this war. In it we have shown the ton-mile situation of five of the great military powers.

THE CHART

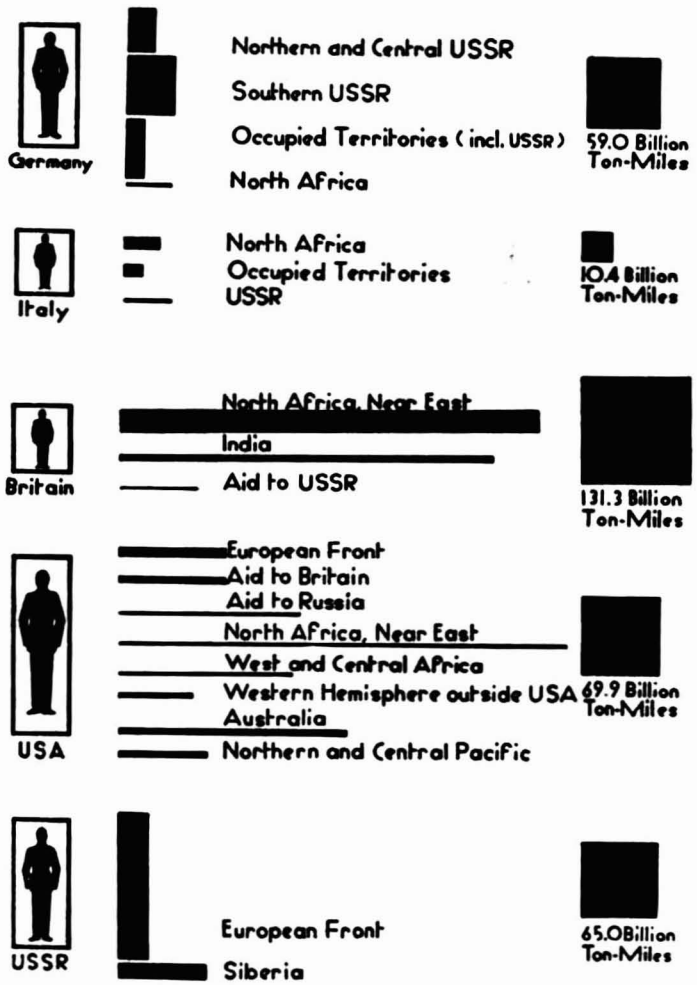
Our chart can lay no claim to absolute accuracy. Neither do we know the numerical strength of the troops at the various fronts, nor could we take into consideration the differences existing at the various fronts, where, according to their employment, the troops need more or less material and are supplied more or less with foodstuffs and war material from the territory in which they happen to be. We have used those numerical strengths generally given in the press and have calculated an average of 10 tons of material per head, in the assumption that possible errors will more or less cancel each other out.

In our calculation of distances, we could also only use approximate figures. In the case of the Axis powers, the distances were measured from a reasonably central point within the countries. As regards the USA, a line approximately 600 miles from the east coast or 1,000 miles from the west coast was assumed as an average supply base in the interior. British supply lines were calculated from the nearest British ports, while for the USSR, because of its loss of the industrial and agricultural basins in the west and south and because of the transfer of many plants far into the interior, we calculated distances from the Ural industrial area, with Sverdlovsk as its center.

The length of the Anglo-American supply lines to North Africa, the Near East, and India, are explained by the long voyage round the Cape of Good Hope, by which most of the goods are transported. The USA bars for lend-lease aid to Britain and the Soviet Union were figured to correspond to supplies

for 200,000 and 100,000 men respectively, while British aid to the USSR is assumed to provide for 50,000 troops. The European front of the USA refers to American troops stationed in Iceland, Ulster, England, and Gibraltar.

The bars given in our chart for each front are of varying length and thickness. The length of each bar represents the distance of the supply routes to the front, while the thickness of the bar shows the amount of material that must be transported to the troops engaged at that front. With the exception of the USSR, only those troops stationed beyond the frontiers of the home country have been considered. Therefore, the millions of British and American soldiers who are in England and the USA respectively have not been counted, although they no doubt also tax the transport capacity of their countries. The aggregate amount of ton-miles for each country is shown in the squares on the right.



Comparison of the Ton-Mile Burdens of Members of the Two World Camps

(not including the new fronts in French North Africa)

The size of the men on the left indicates the approximate human reserves of the nations at war. Dominions and colonies were not included, nor the populations of allied, occupied, or neutral countries, which would increase the labor potential of the major belligerents. The population remaining at the disposal of the USSR was calculated on the strength of recent estimates.

SURPRISING RESULT

The results of our investigation will come as a surprise to most of our readers: although two of the members of the Allied camp—Britain and the USA—were, at the time our chart was drawn, scarcely participating in actual fighting, their ton-mile total is almost three times that of Germany and Italy.

That which becomes most apparent from our chart is the advantage on the part of the Axis through their possession of the inner line. This is most clearly revealed by a comparison between Germany and the USA. Germany with her millions of soldiers on all the frontiers of Europe, from the Bay of Biscay to the North Cape, from the Arctic to the Caucasus, and even in Africa, has fewer ton-miles to overcome than the USA,

who, in comparison to the German armies, has sent out only small military units but scattered over the whole world and over vast distances.

Even without the added requirements of the new fronts in French North Africa, which are not included in our chart, the burden of ton-miles borne by Britain alone is almost twice that of Germany and Italy. And this in spite of the fact that Britain has kept most of her troops at home, whereas the Axis has its troops all standing at the front. This shows how great the advantage of the inner line is. One can imagine how terribly difficult the constantly necessary regroupings of forces from one front to another are for England and America.

LAND AND SEA

The objection might be raised that the Axis has mainly land ton-miles to overcome, while Britain and the USA are faced by water mileage. However, the undeniable advantages which maritime transport has over land transport in peace time are more than outweighed by the incomparably greater danger to which maritime transport is exposed in war time. Britain and America have so far lost about 25 million tons of shipping space in this war, while the Axis has only lost an infinitesimal fraction of that in goods, railway cars, and trucks.

From this point of view, Germany and Italy seem best equipped to overcome supply problems inasmuch as they are able to rely on the excellent system of railways, motor roads, and waterways in Europe and on sea lanes under strong coastal protection. Supplies to North Africa are likewise protected through control of the sea and air in the central Mediterranean.

On the other hand, the Anglo-American powers have to struggle with an ever-mounting tonnage shortage which is endangering not only the supplying of their forces stationed in faraway places but also the civilian needs of the United Kingdom, especially as regards raw materials and foodstuffs. The supply problem of the USSR is to be found less in the dangers to its supply routes than in their inadequacy. The USSR has lost its most valuable and best-developed regions as well as many waterways, and the railway system that is still at its disposal is very loosely knit, while the roads are virtually useless during long periods of the year.

All this seems to point to the fact that "General" Ton-Mile is on the side of the Axis.